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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,577	09/12/2003	Katsuhiko Ito	0505-1246P	5276
2292	7590	09/06/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			KIM, CHONG HWA	
			ART UNIT	PAPER NUMBER
			3682	

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/660,577

Applicant(s)

ITO ET AL.

Examiner

Chong H. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/12/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1, 7, and 12 recite the limitation wherein the lubricating oil tank is positioned above the reservoir that contains the lubricating oil at the bottom portion of the crankcase.

However, claims 4, 10, and 15 recite the limitation wherein the lubricating oil tank is disposed in a lowermost portion of the crankcase. If the limitation recited in claims 1, 7, and 12 is correct, then it appears that the lubricating oil tank can not be disposed in the lowermost portion of the crankcase, as such limitation contradicts the recitation in claims 4, 10, and 15.

Furthermore, claims 1, 7, and 12 recite the limitation wherein the lubricating oil tank is formed within the crankcase. However, claims 3, 9, and 14 recite the limitation wherein the

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lubricating oil tank is formed along an outside wall of the crankcase. Such limitation, in claims 3, 9, and 14 appears to contradict the limitation recited in claims 1, 7, and 12.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 7, and 12 recite the limitations, "a partition wall" in the oil tank and "the upper edge of a partition wall of said lubricating oil tank". The limitations add confusion as to how many partition walls there are in the oil tank.

Claims 1, 7, and 12 recite the limitations, "a pump suction port" in the recovery pump and "a suction port of said recovery pump". The limitations add confusion as to how many suction ports there are in the recovery pump.

Claim 2 recites the limitation "said transmission chamber" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "said recovery pump trochoid pump" in line 2. There is insufficient antecedent basis for this limitation in the claim.

#### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 7, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Breen et al., U.S. Patent 5,682,851.

Breen et al. shows, in Fig. 1, a lubricating system for an internal combustion engine comprising: a lubricating oil tank 27 being integral with a crankcase and being partitioned from a crank chamber by a partition wall projecting from an inside wall of the crankcase (inherent); a recovery pump 16 by which lubricating oil dropping to and dwelling in a bottom portion of the crankcase after lubricating individual portions of the internal combustion engine is sucked through a pump suction port 14 opened in the bottom portion of the crankcase and is fed to the lubricating oil tank; a supply pump 26 for supplying the lubricating oil from the oil tank to the individual portions of the internal combustion engine; wherein the lubricating system comprises an overflow passage 28 through which the lubricating oil that flows over the upper edge of a partition wall of the lubricating oil tank is led to a suction port of the recovery pump.

8. Claims 1, 2, 7, 8, 12, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Katayama, U.S. Pub. No. 2002/0043232 A1.

Katayama shows, in Fig. 15, a lubricating system for an internal combustion engine comprising: a lubricating oil tank 374 being integral with a crankcase and being partitioned from a crank chamber by a partition wall projecting from an inside wall of the crankcase (inherent); a

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recovery pump 360 by which lubricating oil dropping to and dwelling in a bottom portion of the crankcase after lubricating individual portions of the internal combustion engine is sucked through a pump suction port opened in the bottom portion of the crankcase and is fed to the lubricating oil tank; a supply pump 370 for supplying the lubricating oil from the oil tank to the individual portions of the internal combustion engine; wherein the lubricating system comprises an overflow passage 376 through which the lubricating oil that flows over the upper edge of a partition wall of the lubricating oil tank is led to a suction port of the recovery pump, wherein the overflow passage is comprised of the partition wall of the lubricating oil tank, and an overflow oil passage wall for partitioning the transmission chamber and the overflow oil passage from each other.

9. Claims 7, 8, 10-13, 15, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Webster et al., U.S. Pub. No. 2003/0079710 A1.

Webster et al. shows, in Fig. 7, a lubricating system for an internal combustion engine comprising: a lubricating oil tank 36 being integral with a crankcase and being partitioned from a crank chamber 90 by a partition wall 46 projecting from an inside wall of the crankcase; a recovery pump 163 by which lubricating oil dropping to and dwelling in a bottom portion of the crankcase after lubricating individual portions of the internal combustion engine is sucked through a pump suction port opened in the bottom portion of the crankcase and is fed to the lubricating oil tank; an overflow passage through which the lubricating oil that flows over the upper edge of a partition wall of the lubricating oil tank is led to a suction port of the recovery pump, wherein the overflow passage is comprised of the partition wall of the lubricating oil tank,

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and an overflow oil passage wall 46 for partitioning the transmission chamber 84 and the overflow oil passage from each other; wherein the lubricating oil tank is disposed in a lowermost portion of the crankcase and oil disposed therein is free from being stirred by a crankshaft and speed change gears; further including a cutout 52 formed in the partition wall for enabling oil dwelling on an upper surface of the partition wall to flow downwardly through the cutout into an oil sump 36.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1, 2, 4, and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Webster et al.

Webster et al. shows, in Fig. 7, a lubricating system for an internal combustion engine comprising: a lubricating oil tank 36 being integral with a crankcase and being partitioned from a crank chamber 90 by a partition wall 46 projecting from an inside wall of the crankcase; a recovery pump 163 by which lubricating oil dropping to and dwelling in a bottom portion of the crankcase after lubricating individual portions of the internal combustion engine is sucked through a pump suction port opened in the bottom portion of the crankcase and is fed to the lubricating oil tank; an overflow passage through which the lubricating oil that flows over the upper edge of a partition wall of the lubricating oil tank is led to a suction port of the recovery

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pump, wherein the overflow passage is comprised of the partition wall of the lubricating oil tank, and an overflow oil passage wall 46 for partitioning the transmission chamber 84 and the overflow oil passage from each other; wherein the lubricating oil tank is disposed in a lowermost portion of the crankcase and oil disposed therein is free from being stirred by a crankshaft and speed change gears; further including a cutout 52 formed in the partition wall for enabling oil dwelling on an upper surface of the partition wall to flow downwardly through the cutout into an oil sump 36; but fails to show a supply pump.

Examiner takes Official Notice the fact that supplying an additional pump (or usually named “auxiliary pump”) in engines is known in the engine lubrication art. Such provision in engines would have been obvious and would be within the level of ordinary skill in the art.

12. Claims 3, 9, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breen et al., or Katayama, or Webster et al.

Breen et al., Katayama, and Webster et al., all show the lubricating oil tank in the lubricating system for engine, but fails to show the tank being roughly crescent shape along an outside wall of the crankcase.

It would have been obvious to form the tank in a crescent shape along an outside wall of the crankcase since applicant has not disclosed its criticality of the form, does not disclose that having the tank formed in such shape solves any stated problem or is for any particular purpose, and it appears that that the lubricating system would perform equally well with the tank being formed in any reasonable shape.



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13. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Breen et al., or Katayama.

Breen et al. and Katayama, both show the recovery pump and the supply pump, but fails to show the recovery pump being trochoid pump and the both pumps being mounted on a single shaft.

Examiner takes Official Notice the fact that utilization of trochoid pump in engines is well known in the engine lubrication art. Such selection of the pump type in engines would have been obvious and would be within the level of ordinary skill in the art.

Furthermore, Examiner takes Official Notice the fact that when more than one pump is supplied in the lubrication system in engines, it is well known in the engine lubrication art to use the single rotating shaft to operate the pumps in order to reduce the size of the engine. Such practice would have been obvious and would be within the level of ordinary skill in the art.

### *Conclusion*

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Engine with lubricating system including oil tank with overflowing device.

Lawrence, U.S. Pub. No. 2002/0170524 A1

Kitada et al., U.S. Patent 4,815,419


Katsumoto et al., U.S. Patent 4,813,408

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chong H. Kim whose telephone number is (571) 272-7108. The examiner can normally be reached on Monday - Friday; 6:00 - 2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

chk  
September 5, 2006

  
**CHONG H. KIM**  
**PRIMARY EXAMINER**